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**Guideline of environmentally conscious design for low-voltage
apparatus
(English Translation)**

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents" Drafting.

This document replaces GB/T 24975.1-2010 "Guidelines for environmental design of low-voltage electrical appliances Part 1: General provisions" and GB/T 24975.2-2010 "Guidelines for the Environmental Design of Low-Voltage Electrical Appliances Part 2: Isolators", GB/T 24975.3-2010 "Guidelines for the Environmental Design of Low-Voltage Electrical Appliances Part 2: Isolators" Part 3: Circuit Breakers", GB/T 24975.4-2010 "Guidelines for Environmental Design of Low-Voltage Electrical Appliances Part 4: Contactors", GB/T 24975.5-2010 "Guidelines for Environmental Design of Low-Voltage Electrical Appliances Part 5: Fuses", GB/T 24975.6-2010 "Guidelines for Environmental Design of Low-Voltage Electrical Appliances Part 5: Fuses" Part 6: Button Signal Lights" and GB/T 24975.7-2010 "Guidelines for Environmental Design of Low-Voltage Electrical Appliances Part 7: Terminal Blocks", and GB/T 24975.1-2010, GB/T 24975.2-2010, GB/T 24975.3-2010, GB/T 24975.4-2010, Compared with GB/T 24975.5-2010, GB/T 24975.6-2010 and GB/T 24975.7-2010, except for structural adjustments and editorial changes in addition, the main technical changes are as follows.

- Changed the scope of application (see Chapter 1, Chapter 1 of GB/T 24975.1-2010);
- Updated terms and definitions (see Chapter 3, Chapter 3 of GB/T 24975.1-2010);
- Deleted "Introducing environmental factors into the overall consideration of product

design and development" (see Chapter 4 of GB/T 24975.1-2010);

---Added the principles of environmentally conscious design (see Chapter 4);

---Added the content of environmentally conscious design (see Chapter 5);

---Change "Introducing environmental factors into the basic principles of product design and development" to "Introducing elements of environmentally conscious design into design and development" Development guidance" (see Chapter 6, Chapter 5 of GB/T 24975.1-2010);

---Changed the guidance on environmentally conscious design and replaced GB/T 24975.2-2010, GB/T 24975.3-2010, GB/T 24975.4-2010, GB/T 24975.5-2010, GB/T 24975.6-2010, GB/T 24975.7-2010 regulations Summary of special considerations for certain low-voltage electrical products (see 6.3, GB/T 24975.1-2010, GB/T 24975.2-2010, GB/T 24975.3-2010, GB/T 24975.4-2010, GB/T 24975.5-2010, GB/T 24975.6-2010 and Chapter 5 of GB/T 24975.7-2010);

--- Increased review and information sharing of environmentally aware design (see 6.4 and 6.5).

Please note that some content in this document may be subject to patents. The publisher of this document assumes no responsibility for identifying patents.

1 Scope

This document gives the principles and content of environmentally conscious design of low-voltage electrical products, and provides guidance on how to introduce environmentally conscious design elements into the design.

and development guidance.

This document applies to the environmentally conscious design of the following categories of low-voltage electrical products. Other categories of low-voltage electrical products can be used as a reference.

---Isolator;

---breaker;

---Contactor;

---Fuse;

---Button signal light;

---Terminals;

---Transfer switch electrical appliances.

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, the dated quotations for undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to this document.

GB/T 2900.18-2008 Electrical terminology for low-voltage electrical appliances GB/T 14048.2 Low-voltage switchgear and control equipment Part 2: Circuit breakers GB/T 14048.4 Low-voltage switchgear and control equipment Part 4-1. Contactors and electromechanical contactors for motor starters and motor starter (including motor protector) GB/T 18455 packaging recycling mark GB/T 18499 Residual current protective devices (RCD) for household and similar purposes Electromagnetic compatibility GB/T 19001-2016 Quality Management System Requirements GB/T 23686-2022 Environmentally conscious design principles, requirements and guidance GB/T 24001-2016 Environmental management system requirements and usage guidelines GB/T 26572 Limit requirements for restricted substances in electronic and electrical products

3 Terms and definitions

GB/T 2900.18-2008, GB/T 19001-2016, GB/T 23686-2022, GB/T 24001-2016 and the following the following terms and definitions apply to this document.

environmentenvironment External existence that can be affected by the existence of the product, including air, water, land, natural resources, plants, animals, people, and the relationships between them of mutual relationships.

Note: External existence can be described by biodiversity, ecosystems, climate or other characteristics.